

---

**SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549

**SCHEDULE 13D**

Under the Securities Exchange Act of 1934

**(Amendment No. 2)\***

**SPRUCE BIOSCIENCES, INC.**

---

**(Name of Issuer)**

**Common Stock, par value \$0.001 per share**

---

**(Title of Class of Securities)**

**85209E109**

---

**(CUSIP Number)**

**Jay W. Schmelter**  
**101 S. Hanley Road, Suite 1850,**  
**St. Louis, MO, 63105**  
**(314) 726-6700**

**Gloria M. Skigen, Esq.**  
**Holland & Knight LLP, One Stamford Plaza, 263 Tresser Boulevard, Suite 1400**  
**Stamford, CT, 06901**  
**(203) 905-4526**

---

**(Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications)**

**01/07/2025**

---

**(Date of Event Which Requires Filing of This Statement)**

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§ 240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

---

**SCHEDULE 13D**

**CUSIP No. 85209E109**

1 Name of reporting person  
RiverVest Venture Fund III, L.P.  
Check the appropriate box if a member of a Group (See Instructions)

2  (a)  
 (b)

3 SEC use only  
Source of funds (See Instructions)

4 WC  
Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e)

5   
Citizenship or place of organization

6 DELAWARE

7 Sole Voting Power  
0.00

Number of Shares Beneficially Owned by Each Reporting Person With: 8 Shared Voting Power  
720,656.00

9 Sole Dispositive Power  
0.00

10 Shared Dispositive Power  
720,656.00

11 Aggregate amount beneficially owned by each reporting person  
720,656.00

12 Check if the aggregate amount in Row (11) excludes certain shares (See Instructions)

13 Percent of class represented by amount in Row (11)  
0.2 %

14 Type of Reporting Person (See Instructions)  
PN

**Comment for Type of Reporting Person:** The amounts set forth in lines 8, 10 and 11 represent (i) 608,413 shares of Common Stock (as defined below) and (ii) currently exercisable warrants to acquire 112,243 shares of Common Stock (as defined below) at an exercise price of \$3.96 per share. The percentage set forth in line 13 is based upon 41,302,599 shares of common stock, par value \$0.001 per share ("Common Stock"), of Spruce Biosciences, Inc., a Delaware corporation (the "Issuer"), outstanding as of November 8, 2024, as reported in the Issuer's Form 10-Q filed with the Securities and Exchange Commission (the "SEC") on November 12, 2024.

## SCHEDULE 13D

**CUSIP No.** 85209E109

1 Name of reporting person  
RiverVest Venture Fund III (Ohio), L.P.

2 Check the appropriate box if a member of a Group (See Instructions)

(a)

(b)

3 SEC use only  
Source of funds (See Instructions)

4 WC  
Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e)

5   
Citizenship or place of organization

6 DELAWARE

Sole Voting Power

7

0.00

Number of Shares Beneficially

Shared Voting Power

Owned by Each Reporting Person

8

38,251.00

Sole Dispositive Power

9

0.00

With: Shared Dispositive Power

10

38,251.00

Aggregate amount beneficially owned by each reporting person

11 38,251.00

Check if the aggregate amount in Row (11) excludes certain shares (See Instructions)

12   
Percent of class represented by amount in Row (11)

13 0.1 %

Type of Reporting Person (See Instructions)

14 PN

**Comment for Type of Reporting Person:** The amounts set forth in lines 8, 10 and 11 represent (i) 32,294 shares of Common Stock and (ii) currently exercisable warrants to acquire 5,957 shares of Common Stock at an exercise price of \$3.96 per share. The percentage set forth in line 13 is based upon 41,302,599 shares of Common Stock outstanding as of November 8, 2024, as reported in the Issuer's Form 10-Q filed with the SEC on November 12, 2024.

## SCHEDULE 13D

**CUSIP No.** 85209E109

Name of reporting person

1 RiverVest Venture Partners III (Ohio), LLC

Check the appropriate box if a member of a Group (See Instructions)

2  (a)  
 (b)

3 SEC use only  
Source of funds (See Instructions)

4 AF  
Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e)

5

6 Citizenship or place of organization

DELAWARE

Sole Voting Power

7

Number of  
Shares

0.00

Shared Voting Power

Beneficially

8

Owned by

38,251.00

Each

Sole Dispositive Power

Reporting

9

Person

0.00

With:

Shared Dispositive Power

10

38,251.00

Aggregate amount beneficially owned by each reporting person

11

38,251.00

Check if the aggregate amount in Row (11) excludes certain shares (See Instructions)

12

Percent of class represented by amount in Row (11)

13

0.1 %

Type of Reporting Person (See Instructions)

14

OO

**Comment for Type of Reporting Person:** The amounts set forth in lines 8, 10 and 11 represent (i) 32,294 shares of Common Stock owned by RiverVest Venture Fund III (Ohio), L.P., a Delaware limited partnership ("RiverVest III (Ohio)") and (ii) 5,957 additional shares of Common Stock issuable upon the exercise of the warrants held by RiverVest Fund III (Ohio) at an exercise price of \$3.96 per share. RiverVest Venture Partners III (Ohio), LLC, a Delaware limited liability company ("RiverVest Partners III (Ohio)"), is the general partner of RiverVest III (Ohio). The percentage set forth in line 13 is based upon 41,302,599 shares of Common Stock outstanding as of November 8, 2024, as reported in the Issuer's Form 10-Q filed with the SEC on November 12, 2024.

## SCHEDULE 13D

**CUSIP No.** 85209E109

Name of reporting person

1

RiverVest Venture Partners III, L.P.

Check the appropriate box if a member of a Group (See Instructions)

2

(a)

(b)

3

SEC use only

Source of funds (See Instructions)

4

AF

Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e)

5

Citizenship or place of organization

6

DELAWARE

Number of  
Shares

7

Sole Voting Power

Beneficially

0.00

Owned by

Each Reporting Person With:	8	Shared Voting Power
		758,907.00
		Sole Dispositive Power
	9	0.00
		Shared Dispositive Power
	10	758,907.00
		Aggregate amount beneficially owned by each reporting person
11		758,907.00
		Check if the aggregate amount in Row (11) excludes certain shares (See Instructions)
12		<input type="checkbox"/>
		Percent of class represented by amount in Row (11)
13		0.2 %
		Type of Reporting Person (See Instructions)
14		PN

**Comment for Type of Reporting Person:** The amounts set forth in lines 8, 10 and 11 represent (i) 608,413 shares of Common Stock owned by RiverVest Venture Fund III, L.P., a Delaware limited partnership ("RiverVest III"), (ii) 112, 243 additional shares of Common Stock issuable upon the exercise of the warrants held by RiverVest III, (iii) 32,294 shares of Common Stock owned by RiverVest III (Ohio), and (iv) 5,957 additional shares of Common Stock issuable upon the exercise of the warrants held by RiverVest III (Ohio). RiverVest Venture Partners III, L.P., a Delaware limited partnership ("RiverVest Partners III"), is the general partner of RiverVest III and the sole member of RiverVest Partners III (Ohio), which is the general partner of RiverVest III (Ohio). The percentage set forth in line 13 is based upon 41,302,599 shares of Common Stock outstanding as of November 8, 2024, as reported in the Issuer's Form 10-Q filed with the SEC on November 12, 2024.

## SCHEDULE 13D

**CUSIP No.** 85209E109

1	Name of reporting person
	RiverVest Venture Partners III, LLC
	Check the appropriate box if a member of a Group (See Instructions)
2	<input type="checkbox"/> (a)
	<input type="checkbox"/> (b)
3	SEC use only
4	Source of funds (See Instructions)
	AF
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e)
	<input type="checkbox"/>
6	Citizenship or place of organization
	DELAWARE

Number of Shares Beneficially Owned by Each Reporting Person With:	7	Sole Voting Power
		0.00
		Shared Voting Power
	8	758,907.00
	9	Sole Dispositive Power
		0.00

Shared Dispositive Power

10

758,907.00

Aggregate amount beneficially owned by each reporting person

11

758,907.00

Check if the aggregate amount in Row (11) excludes certain shares (See Instructions)

12

Percent of class represented by amount in Row (11)

13

0.2 %

Type of Reporting Person (See Instructions)

14

OO

**Comment for Type of Reporting Person:** The amounts set forth in lines 8, 10 and 11 represent (i) 608,413 shares of Common Stock owned by RiverVest III, (ii) 112, 243 additional shares of Common Stock issuable upon the exercise of the warrants held by RiverVest III, (iii) 32,294 shares of Common Stock owned by RiverVest III (Ohio), and (iv) 5,957 additional shares of Common Stock issuable upon the exercise of the warrants held by RiverVest III (Ohio). RiverVest Venture Partners III, LLC, a Delaware limited liability company, is the general partner of RiverVest Partners III, which is (a) the general partner of RiverVest III and (b) the sole member of RiverVest Partners III (Ohio), which is the general partner of RiverVest III (Ohio). The percentage set forth in line 13 is based upon 41,302,599 shares of Common Stock outstanding as of November 8, 2024, as reported in the Issuer's Form 10-Q filed with the SEC on November 12, 2024.

### SCHEDULE 13D

CUSIP No. 85209E109

Name of reporting person

1

RiverVest Venture Fund IV, L.P.

Check the appropriate box if a member of a Group (See Instructions)

2

(a)

(b)

3

SEC use only

Source of funds (See Instructions)

4

WC

Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e)

5

Citizenship or place of organization

6

DELAWARE

Sole Voting Power

7

0.00

Number of Shares Beneficially Owned by Each Reporting Person With:

Shared Voting Power

8

1,000,614.00

Sole Dispositive Power

9

0.00

Shared Dispositive Power

10

1,000,614.00

11

Aggregate amount beneficially owned by each reporting person

1,000,614.00

Check if the aggregate amount in Row (11) excludes certain shares (See Instructions)

12

Percent of class represented by amount in Row (11)

13

2.4 %

Type of Reporting Person (See Instructions)

14

PN

**Comment** The amounts set forth in lines 8, 10 and 11 represent (i) 527,814 shares of Common Stock owned by RiverVest Venture for Type Fund IV, L.P., a Delaware limited partnership ("RiverVest IV"), and (ii) 472,800 additional shares of Common Stock of issuable upon the exercise of the warrants held by RiverVest IV at an exercise price of \$3.96 per share. The percentage of Reporting Person: set forth in line 13 is based upon 41,302,599 shares of Common Stock outstanding as of November 8, 2024, as reported in the Issuer's Form 10-Q filed with the SEC on November 12, 2024.

## SCHEDULE 13D

**CUSIP No.** 85209E109

Name of reporting person

1

RiverVest Venture Partners IV, L.P.

Check the appropriate box if a member of a Group (See Instructions)

2

(a)

(b)

3

SEC use only

Source of funds (See Instructions)

4

AF

Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e)

5

Citizenship or place of organization

6

DELAWARE

Sole Voting Power

7

0.00

Number of  
Shares

Shared Voting Power

Beneficially 8

1,000,614.00

Owned by

Sole Dispositive Power

Each

9

0.00

Reporting

Person

Shared Dispositive Power

With:

10

1,000,614.00

Aggregate amount beneficially owned by each reporting person

11

1,000,614.00

Check if the aggregate amount in Row (11) excludes certain shares (See Instructions)

12

Percent of class represented by amount in Row (11)

13

2.4 %

14

Type of Reporting Person (See Instructions)

**Comment for Type of Reporting Person:** The amounts set forth in lines 8, 10 and 11 represent (i) 527,814 shares of Common Stock owned by RiverVest IV, and (ii) 472,800 additional shares of Common Stock issuable upon the exercise of the warrants held by RiverVest IV. RiverVest Venture Partners IV, L.P., a Delaware limited partnership ("RiverVest Partners IV"), is the general partner of RiverVest IV. The percentage set forth in line 13 is based upon 41,302,599 shares of Common Stock outstanding as of November 8, 2024, as reported in the Issuer's Form 10-Q filed with the SEC on November 12, 2024.

SCHEDULE 13D

CUSIP No. 85209E109

1	Name of reporting person
	RiverVest Venture Partners IV, LLC
	Check the appropriate box if a member of a Group (See Instructions)
2	<input type="checkbox"/> (a)
	<input type="checkbox"/> (b)
3	SEC use only
	Source of funds (See Instructions)
4	AF
	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e)
5	<input type="checkbox"/>
	Citizenship or place of organization
6	DELAWARE
	Sole Voting Power
7	0.00
Number of Shares Beneficially Owned by Each Reporting Person With:	Shared Voting Power
8	1,000,614.00
	Sole Dispositive Power
9	0.00
	Shared Dispositive Power
10	1,000,614.00
	Aggregate amount beneficially owned by each reporting person
11	1,000,614.00
	Check if the aggregate amount in Row (11) excludes certain shares (See Instructions)
12	<input type="checkbox"/>
	Percent of class represented by amount in Row (11)
13	2.4 %
	Type of Reporting Person (See Instructions)
14	OO

**Comment for Type of Reporting Person:** The amounts set forth in lines 8, 10 and 11 represent (i) 527,814 shares of Common Stock owned by RiverVest IV, and (ii) 472,800 additional shares of Common Stock issuable upon the exercise of the warrants held by RiverVest IV. RiverVest Venture Partners IV, LLC, a Delaware limited liability company, is the general partner of RiverVest Partners IV, which is the general partner of RiverVest IV. The percentage set forth in line 13 is based upon 41,302,599 shares of Common Stock outstanding as of November 8, 2024, as reported in the Issuer's Form 10-Q filed with the SEC on November 12, 2024.



SCHEDULE 13D

CUSIP No. 85209E109

1 Name of reporting person  
John P. McKearn, Ph.D.  
Check the appropriate box if a member of a Group (See Instructions)

2  (a)  
 (b)

3 SEC use only  
Source of funds (See Instructions)

4 AF  
Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e)

5   
Citizenship or place of organization

6 UNITED STATES  
Sole Voting Power  
7 0.00  
Number of Shares Beneficially Owned by Each Reporting Person With:  
8 Shared Voting Power  
1,759,521.00  
9 Sole Dispositive Power  
0.00  
10 Shared Dispositive Power  
1,759,521.00  
Aggregate amount beneficially owned by each reporting person

11 1,759,521.00  
Check if the aggregate amount in Row (11) excludes certain shares (See Instructions)

12   
Percent of class represented by amount in Row (11)

13 4.2 %  
Type of Reporting Person (See Instructions)

14 IN

**Comment for Type of Reporting Person:** The amounts set forth in lines 8, 10 and 11 represent (i) an aggregate of 1,168,521 shares of Common Stock owned collectively by RiverVest III, RiverVest III (Ohio) and RiverVest IV, and (ii) an aggregate of 591,000 additional shares of Common Stock issuable upon the exercise of the warrants held collectively by RiverVest III, RiverVest III (Ohio) and RiverVest IV, in each case at an exercise price of \$3.96 per share. Dr. McKearn is a member of RiverVest Venture Partners III, LLC, which is the general partner of RiverVest Partners III. RiverVest Partners III is (a) the general partner of RiverVest III and (b) the sole member of RiverVest Partners III (Ohio), which is the general partner of RiverVest III (Ohio). Dr. McKearn is a member of RiverVest Venture Partners IV, LLC, which is the general partner of RiverVest Partners IV. RiverVest Partners IV is the general partner of RiverVest IV. The percentage set forth in line 13 is based upon 41,302,599 shares of Common Stock outstanding as of November 8, 2024, as reported in the Issuer's Form 10-Q filed with the SEC on November 12, 2024.

Name of reporting person

1

Jay Schmelter

Check the appropriate box if a member of a Group (See Instructions)

2

(a)

(b)

3

SEC use only

Source of funds (See Instructions)

4

AF

Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e)

5

Citizenship or place of organization

6

UNITED STATES

Sole Voting Power

7

0.00

Number of  
Shares

Shared Voting Power

Beneficially 8

Owned by

1,759,521.00

Each

Sole Dispositive Power

Reporting 9

Person

0.00

With:

Shared Dispositive Power

10

1,759,521.00

Aggregate amount beneficially owned by each reporting person

11

1,759,521.00

Check if the aggregate amount in Row (11) excludes certain shares (See Instructions)

12

Percent of class represented by amount in Row (11)

13

4.2 %

Type of Reporting Person (See Instructions)

14

IN

**Comment for Type of Reporting Person:** The amounts set forth in lines 8, 10 and 11 represent (i) an aggregate of 1,168,521 shares of Common Stock owned collectively by RiverVest III, RiverVest III (Ohio) and RiverVest IV, and (ii) an aggregate of 591,000 additional shares of Common Stock issuable upon the exercise of the warrants held collectively by RiverVest III, RiverVest III (Ohio) and RiverVest IV, in each case at an exercise price of \$3.96 per share. Mr. Schmelter is a member of RiverVest Venture Partners III, LLC, which is the general partner of RiverVest Partners III. RiverVest Partners III is (a) the general partner of RiverVest III and (b) the sole member of RiverVest Partners III (Ohio), which is the general partner of RiverVest III (Ohio). Mr. Schmelter is a member of RiverVest Venture Partners IV, LLC, which is the general partner of RiverVest Partners IV. RiverVest Partners IV is the general partner of RiverVest IV. The percentage set forth in line 13 is based upon 41,302,599 shares of Common Stock outstanding as of November 8, 2024, as reported in the Issuer's Form 10-Q filed with the SEC on November 12, 2024.

SCHEDULE 13D

1 Name of reporting person  
 Thomas C. Melzer  
 Check the appropriate box if a member of a Group (See Instructions)

2  (a)  
 (b)

3 SEC use only  
 Source of funds (See Instructions)

4 AF  
 Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e)

5   
 Citizenship or place of organization

6 UNITED STATES  
 Sole Voting Power

7 0.00  
 Number of Shares Beneficially Owned by Each Reporting Person

8 Shared Voting Power  
 758,907.00

9 Sole Dispositive Power  
 0.00

10 Shared Dispositive Power  
 758,907.00

11 Aggregate amount beneficially owned by each reporting person  
 758,907.00  
 Check if the aggregate amount in Row (11) excludes certain shares (See Instructions)

12   
 Percent of class represented by amount in Row (11)

13 0.2 %  
 Type of Reporting Person (See Instructions)

14 IN

**Comment for Type of Reporting Person:** The amounts set forth in lines 8, 10 and 11 represent (i) 608,413 shares of Common Stock owned by RiverVest III, (ii) 112, 243 additional shares of Common Stock issuable upon the exercise of the warrants held by RiverVest III, (iii) 32,294 shares of Common Stock owned by RiverVest III (Ohio), and (iv) 5,957 additional shares of Common Stock issuable upon the exercise of the warrants held by RiverVest III (Ohio). Mr. Melzer is a member of RiverVest Venture Partners III, LLC, which is the general partner of RiverVest Partners III. RiverVest Partners III is (a) the general partner of RiverVest III and (b) the sole member of RiverVest Partners III (Ohio), which is the general partner of RiverVest III (Ohio). The percentage set forth in line 13 is based upon 41,302,599 shares of Common Stock outstanding as of November 8, 2024, as reported in the Issuer's Form 10-Q filed with the SEC on November 12, 2024.

## SCHEDULE 13D

**CUSIP No.** 85209E109

1 Name of reporting person  
 Niall O'Donnell, Ph.D.

2 Check the appropriate box if a member of a Group (See Instructions)

(a)

(b)

3 SEC use only  
Source of funds (See Instructions)

4 AF  
Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e)

5   
Citizenship or place of organization

6 UNITED STATES

Sole Voting Power

7

32,500.00

Number of Shares Beneficially

Shared Voting Power

8

1,000,614.00

Owned by Each Reporting Person

Sole Dispositive Power

9

32,500.00

With: Shared Dispositive Power

10

1,000,614.00

Aggregate amount beneficially owned by each reporting person

11 1,000,614.00

Check if the aggregate amount in Row (11) excludes certain shares (See Instructions)

12   
Percent of class represented by amount in Row (11)

13 2.4 %

Type of Reporting Person (See Instructions)

14 IN

**Comment for Type of Reporting Person:** The amounts set forth in lines 7 and 9 represent 32,500 shares of Common Stock options owned by Mr. O'Donnell. The amounts set forth in lines 8, 10 and 11 represent (i) 527,814 shares of Common Stock owned by RiverVest IV, and (ii) 472,800 additional shares of Common Stock issuable upon the exercise of the warrants held by RiverVest IV. Mr. O'Donnell is a member of RiverVest Venture Partners IV, LLC, which is the general partner of RiverVest Partners IV. RiverVest Partners IV is the general partner of RiverVest IV. The percentage set forth in line 13 is based upon 41,302,599 shares of Common Stock outstanding as of November 8, 2024, as reported in the Issuer's Form 10-Q filed with the SEC on November 12, 2024.

## SCHEDULE 13D

Item 1. Security and Issuer

Title of Class of Securities:

(a) Common Stock, par value \$0.001 per share

Name of Issuer:

(b) SPRUCE BIOSCIENCES, INC.

Address of Issuer's Principal Executive Offices:

(c) 611 GATEWAY BOULEVARD, SUITE 740, SOUTH SAN FRANCISCO, CALIFORNIA , 94080.

Item 2. Identity and Background

(a) No change.

(b) No change.

(c) No change.

(d) No change.

(e) No change.

(f) No change.

Item 3. Source and Amount of Funds or Other Consideration

No change.

Item 4. Purpose of Transaction

No change.

Item 5. Interest in Securities of the Issuer

(a) The aggregate number and percentage of the shares of Common Stock outstanding beneficially owned by each Reporting Person set forth below and on the cover pages hereof are based on 41,302,599 shares of Common Stock outstanding as of November 8, 2024, as reported in the Issuer's Form 10-Q filed with the SEC on November 12, 2024.

(b) (i) sole power to vote or to direct the vote: See line 7 of cover sheets; (ii) shared power to vote or to direct the vote: See line 8 of cover sheets; (iii) sole power to dispose or to direct the disposition: See line 9 of cover sheets; (iv) shared power to dispose or to direct the disposition: See line 10 of cover sheets. By virtue of the relationships described herein, the Reporting Persons may be deemed to constitute a "group" for purposes of Section 13(d)(3) of the Act. The filing of this Statement shall not be construed as an admission that the Reporting Persons are a group, or have agreed to act as a group. Each Reporting Person expressly disclaims beneficial ownership of the securities reported herein, except to the extent such Reporting Person actually exercises voting or dispositive power with respect to such securities.

(c) Except as set forth herein, none of the Reporting Persons has effected any transactions in shares of the Issuer's Common Stock during the last 60 days.

(d) No other person is known to have the right to receive or the power to direct the receipt of dividends from, or any proceeds from the sale of, the shares of Common Stock beneficially owned by any of the Reporting Persons.

(e) The Reporting Persons ceased to own more than five percent of the outstanding Common Stock on January 7, 2025.

Item 6. Contracts, Arrangements, Understandings or Relationships With Respect to Securities of the Issuer

No change.

Item 7. Material to be Filed as Exhibits.

Exhibit A: Joint Filing Agreement, dated October 23, 2020, by and among RiverVest Venture Fund III, L.P., RiverVest Venture Fund III (Ohio), L.P., RiverVest Venture Partners III (Ohio), LLC, RiverVest Venture Partners III, L.P., RiverVest Venture Partners III, LLC, RiverVest Venture Fund IV, L.P., RiverVest Venture Partners IV, L.P., RiverVest Venture Partners IV, LLC, John P. McKearn, Jay Schmelter, Thomas C. Melzer and Niall O'Donnell.

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

RiverVest Venture Fund III, L.P.

Signature: By: RiverVest Venture Partners III, L.P., its general partner By: RiverVest Venture Partners III, LLC, its general partner By: /s/ Jay Schmelter  
Name/Title: Jay Schmelter/Member  
Date: 01/10/2025

RiverVest Venture Fund III (Ohio), L.P.

Signature: By: RiverVest Venture Partners III (Ohio), LLC, its general partner, as indicated in the signature block that immediately follows.  
Name/Title: Jay Schmelter/Member  
Date: 01/10/2025

RiverVest Venture Partners III (Ohio), LLC

Signature: By: RiverVest Venture Partners III, L.P., its sole member By: RiverVest Venture Partners III, LLC, its general partner By: /s/ Jay Schmelter  
Name/Title: Jay Schmelter/Member  
Date: 01/10/2025

RiverVest Venture Partners III, L.P.

Signature: By: RiverVest Venture Partners III, LLC, its general partner By: /s/ Jay Schmelter

Name/Title: Jay Schmelter/Member

Date: 01/10/2025

RiverVest Venture Partners III, LLC

Signature: By: /s/ Jay Schmelter

Name/Title: Jay Schmelter/Member

Date: 01/10/2025

RiverVest Venture Fund IV, L.P.

Signature: By: RiverVest Venture Partners IV, L.P., its  
general partner By: RiverVest Venture Partners IV,  
LLC, its general partner By: /s/ Jay Schmelter

Name/Title: Jay Schmelter/Member

Date: 01/10/2025

RiverVest Venture Partners IV, L.P.

Signature: By: RiverVest Venture Partners IV, LLC, its  
general partner By: /s/ Jay Schmelter

Name/Title: Jay Schmelter/Member

Date: 01/10/2025

RiverVest Venture Partners IV, LLC

Signature: By: /s/ Jay Schmelter

Name/Title: Jay Schmelter/Member

Date: 01/10/2025

John P. McKearn, Ph.D.

Signature: /s/ John P. McKearn, Ph.D.

Name/Title: John P. McKearn, Ph.D.

Date: 01/10/2025

Jay Schmelter

Signature: /s/ Jay Schmelter

Name/Title: Jay Schmelter

Date: 01/10/2025

Thomas C. Melzer

Signature: /s/ Thomas C. Melzer

Name/Title: Thomas C. Melzer

Date: 01/10/2025

Niall O'Donnell, Ph.D.

Signature: /s/ Niall O'Donnell, Ph.D.

Name/Title: Niall O'Donnell, Ph.D.

Date: 01/10/2025